

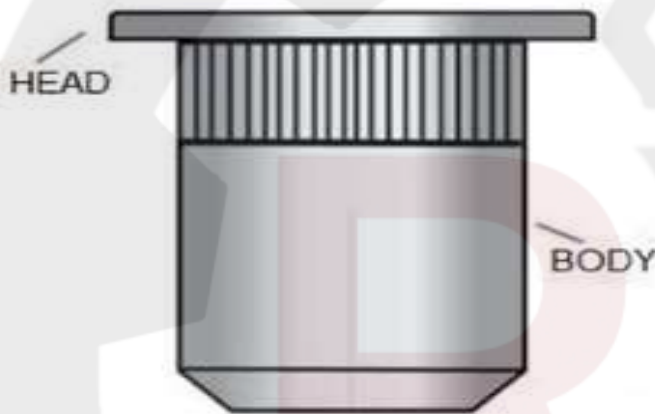


BLIND RIVET NUTS A TECHNICAL GUIDE

TECHNICAL CATALOGUE NUMBER: **TECH002**

Blind Rivet Nuts are single-part hollow thread nuts which are installed from a single side without the need for reworking

1. TERMINOLOGY:

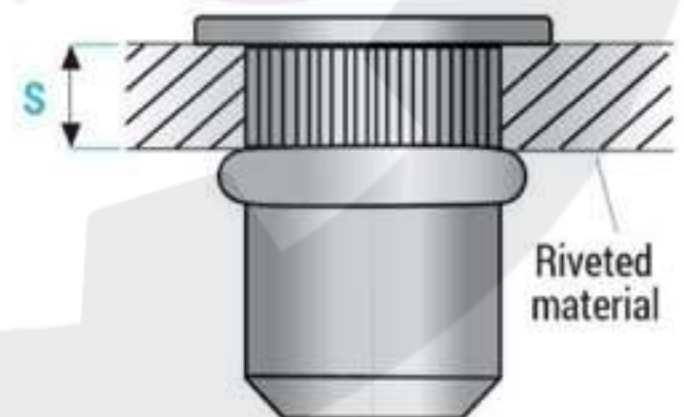


Head – Part of the Blind Nut which lies on the component.

Body – Part of the Blind Rivet Nut below the Rivet Head

Grip Thickness – Designates the thickness of the material (one or several components) being riveted.

Grip Range – The Material thickness must be within the minimum and the maximum value for which the particular blind rivet nut is designed.





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Quality Fasteners Specialist

No. 4, M.G.S. Complex, Benki Nawab Street, S.P. Road Cross, Bangalore 560002

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8310165941 / 9008782885



sales@royalfastenersindia.com

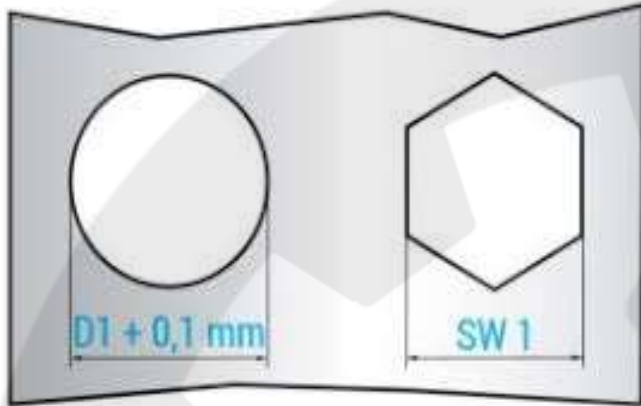


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BLIND RIVET NUTS

A TECHNICAL GUIDE

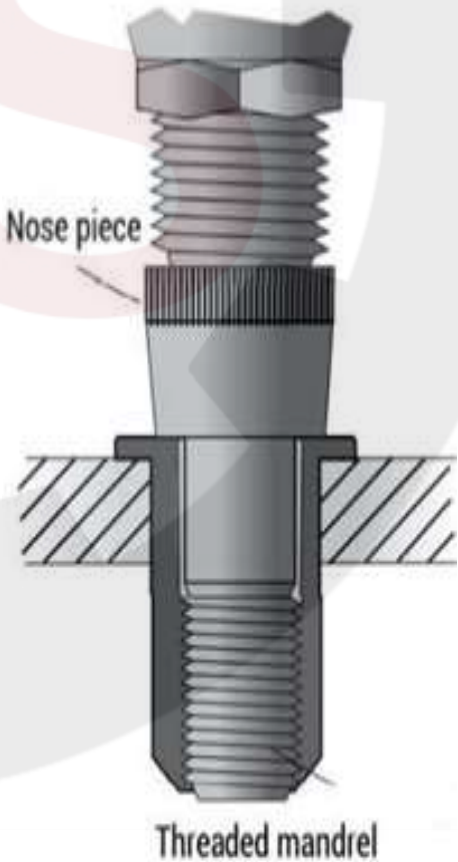
TECHNICAL CATALOGUE NUMBER: **TECH0002**



Dimension of the Drilling Hole- For cylindrical receiving holes, the dimension is referred to as the diameter $D1 + 0.1\text{mm}$ and for Hexagonal receiving holes it is the width across flats (A/F). Please refer to the recommended drilling hole dimensions in the respective datasheets.

Nose Piece – Part of the setting tool which lies against the head of the blind rivet nut during the setting process.

Thread Mandrel – Part to screw the Blind Rivet Nut onto.





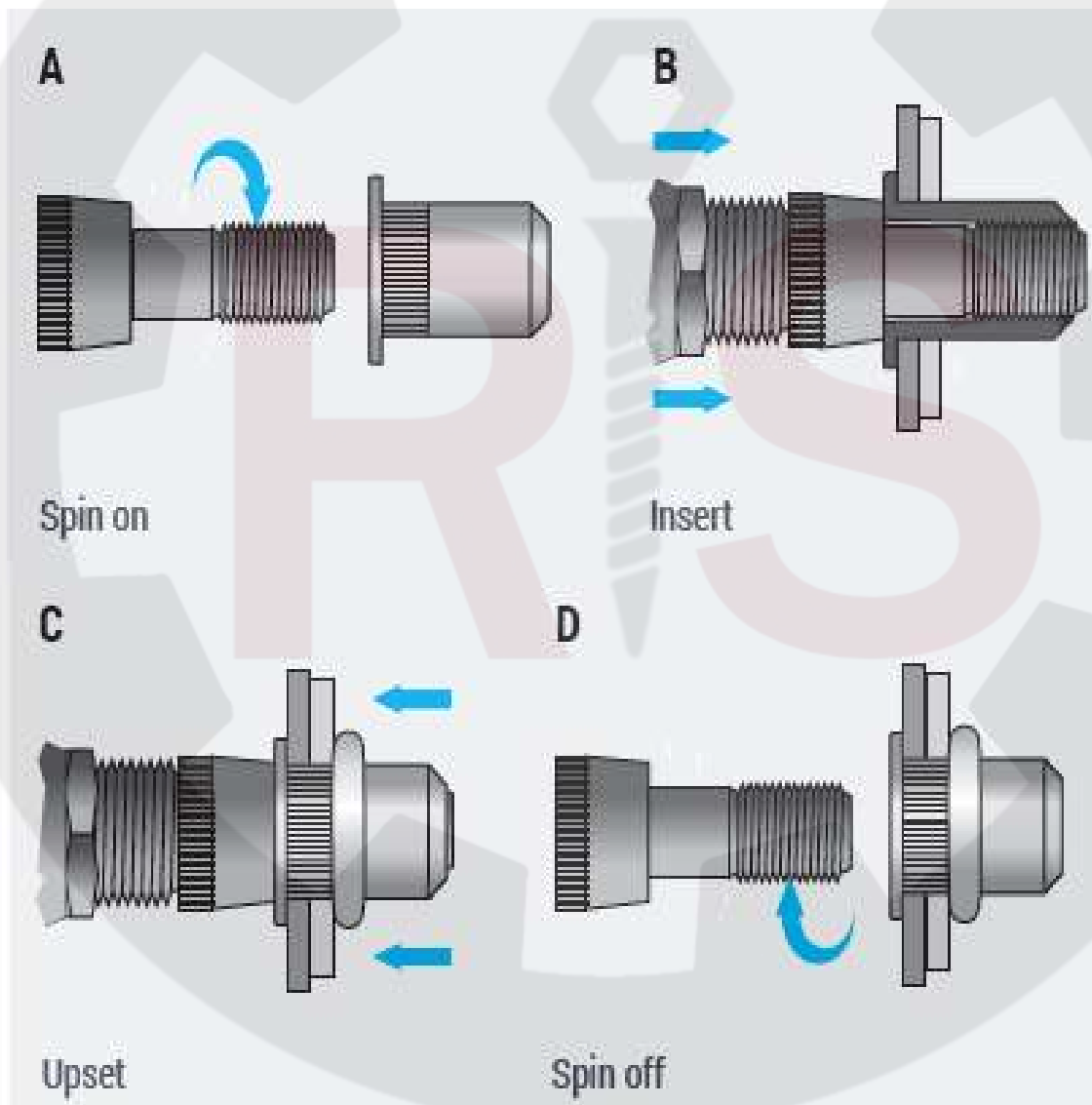
BLIND RIVET NUTS

A TECHNICAL GUIDE

TECHNICAL CATALOGUE NUMBER: **TECH0002**

2. **INSTALLATION PROCEDURE:**

The spindle stroke procedure is recommended. For setting the blind rivet nut has to be screwed onto the mandrel of the tool, inserted into the drilled hole of the component and then fixed by activating the tool. In doing so, the closing head of the blind rivet nut will be formed. After unscrewing the blind rivet nut, the components can be screwed together.



- We recommend using preferably blind rivet nuts with knurled or hexagonal body in order to eliminate the risk of rotation.



BLIND RIVET NUTS

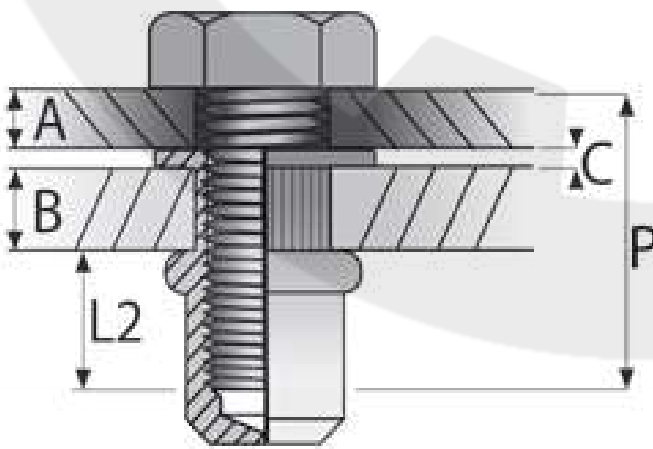
A TECHNICAL GUIDE

TECHNICAL CATALOGUE NUMBER: **TECH0002**

- It must be ensured that the components cannot rotate against each other. Only a minimum gap is allowed between the components to be connected.
- Prior to the setting of the blind rivet nut series, determine the optimal settings for your setting too, (stroke setting and /or force setting) by conducting a mounting test.
- Lubrication of the screw joint: In case of volume production, in particular components made of stainless steel, we recommend to lubricate the threaded mandrel of your setting tool prior to the first installation and afterwards periodically, in order to ensure the optimal setting and to increase the life cycle of your setting tool.

3. OPTIMUM JOINT DESIGN RECOMMENDATIONS:

- Closed shapes such as tubing / extrusions need enough clearance in the blind space for the nut to be fully inserted.
- Hole size should be as per product tolerance and perpendicular to the job surface.
- The thread of the blind rivet nut has the standard tolerances 6H as per ISO 68. They can be used with standard screw thread with the tolerances of 6G.
- Mating screw thread length should engage all threads of the rivet nut to assure optimum torque strength.
- If the mating screw has any kind of locking mechanism, a Hex or Semi-hex body nut in a hex hole will be required to resist the prevailing torque created by the locking mechanism.



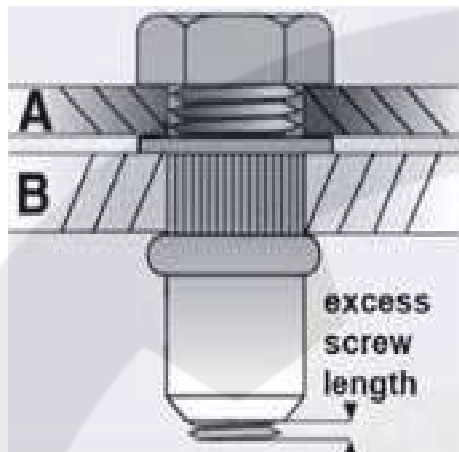
Closed Body End – The screw length (P) for a closed blind rivet nut is linked to the material thickness of the riveted components (A+B) plus the head height of the gap (C) in combination with the length of the internal thread L2.



BLIND RIVET NUTS

A TECHNICAL GUIDE

TECHNICAL CATALOGUE NUMBER: **TECH0002**



Open Body End – The screw protrusion must be at least on thread turn.

4. MATERIAL COMBINATION GUIDE:

The following rule applies in order to avoid contact corrosion:

The connecting parts in a specific application must have at least the same corrosion resistance as the connected components. If this is not possible, the connecting parts must be of higher quality than the components.

Which Blind Nut into which Sheet? The version you choose also depends on the resistance of the blind rivet nut and screw.

XXX- Highly Recommended. XX – Recommended. X – Not Preferred. – Not Advisable.

		AL	ST	A2	A4
Aluminium		XXX	–	XXX	XXX
Steel zinc plated		X	XXX	XX	XX
Stainless steel A2		XX	–	XXX	XXX
Stainless steel A4		XX	–	XXX	XXX
Copper		XX	–	XX	XX
Brass		XX	–	XX	XX

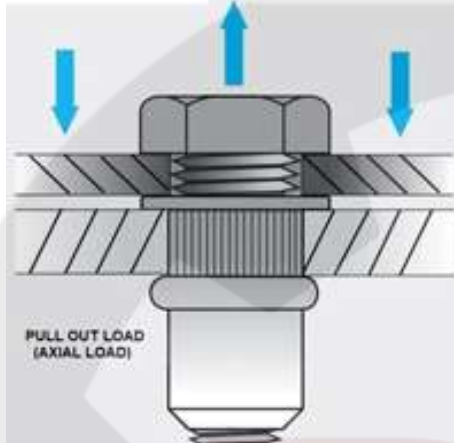


BLIND RIVET NUTS

A TECHNICAL GUIDE

TECHNICAL CATALOGUE NUMBER: **TECH0002**

5. MECHANICAL PROPERTIES:



Pull out Load or sometimes referred as Pus Out. Load values given in the datasheets are only reference values.

We strongly advise the customer to do their own tests in the proper material thickness and specific application.



Tightening Torque – The test assembly of the screw connection of a non-rotating component with a screw against the head of the blind rivet nut. While doing this, the load bearing capacity of the nut thread is determined.

Maximum Torque – A Torque value after which the free removability of the screw in the nut thread must still be provided.

6. VARIANTS:

- o Body Shape:



SEMI HEX



FULL HEX



ROUND



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TECHNICAL CATALOGUE NUMBER: **TECH002**

○ Body Type:

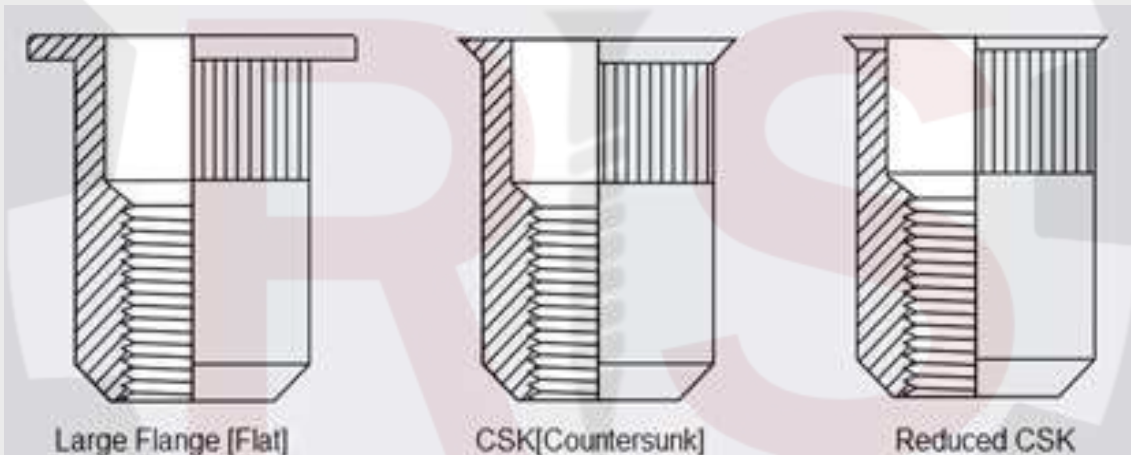


OPEN END



CLOSED END

○ Collar / Flange:

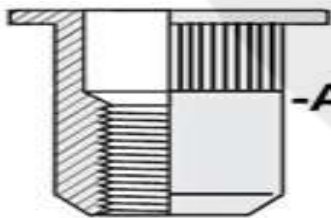


Large Flange [Flat]

CSK [Countersunk]

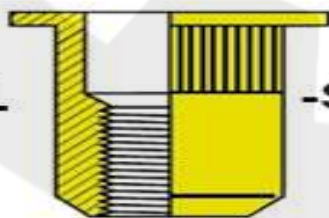
Reduced CSK

○ Materials:



-AL

ALUMINIUM



-ST

STEEL ZINC PLATED



-A2

STAINLESS STEEL A2



-A4

STAINLESS STEEL A4



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7. BLIND NUT SELECTION GUIDE:

Parent Material	Pierced Hole	Drilled Hole	Punched Hole	Laser Cut Hole	Moulded Hole
Sheet Metal		Round Body	Round / Hex	Round / Hex	
Tubing	Round / Hex	Round Body			
Aluminium Extrusion		Round Body			
Hydroformed Tubing	Round / Hex	Round Body			
Foam Core Panels		Round Body			
SMC/Blow Moulded Plastic		Round / Split			
Plastic Extrusion		Round / Split			
Injection Moulded Plastic		Round / Split			Round / Hex
Layered Fibre Glass		Round / Split			